## REMARKS

In the Office Action mailed on February 26, 2004, all pending claims 1-27 were rejected based upon the same cited reference. Specifically, the Examiner rejected claims 1-27 under 35 U.S.C. § 102(b) as being anticipated by the Balkanski et al. reference (U.S. Patent No. 5,936,616). However, after careful review of the Balkanski et al. reference, Applicants believe that the pending claims 1-27 are patentable over the cited reference. Accordingly, Applicants respectfully traverse the rejection and request reconsideration of the present application in view of the arguments below.

### Legal Precedents

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under Section 102, a single reference must teach each and every element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Thus, if the claims recite even one element not found in the cited reference, the reference does not anticipate the claimed invention.

### Claimed Subject Matter

The present application includes independent claims 1, 12, 18 and 24. Each of the independent claims 1, 12, 18 and 24 includes recitations relating to, *inter alia, lossless compression of image data.* Further, the independent claims 1 and 12 include recitations relating to, *inter alia, applying the compression code tables to uncompressed image data.* Specifically, independent claim 1 recites:

> compiling and storing a plurality of compression mapping tables for converting uncompressed data representative of individual picture elements to lossless compressed data;
>
> applying at least first and second compression mapping tables from the stored plurality of compression

> mapping tables to subregions of an uncompressed image data stream to compress the subregions.

Independent claim 12 recites:

> defining a family of compression code tables for converting uncompressed image data to lossless compressed data;
> ...
> compressing the image data stream in accordance with the selected compression code tables at the compression station for decompression at the decompression station.

Similarly, independent claim 18 recites:

> a plurality of compression code tables for conversion of image data to lossless compressed image data.

Independent claim 24 recites:

> configuration code and a plurality of compression code tables stored on the machine readable medium, the configuration code including an algorithm for analyzing an image data stream, for compressing subregions of the image data stream by application of a plurality of compression code tables, and for compiling the compressed subregions into a lossless compressed data file.

Accordingly, each of the independent claims 1, 12, 18 and 24 includes recitations relating to the *compression of image data in a lossless fashion*, which is clearly described in the present application.

In the present application, Applicants describe a technique for rapidly and optimally compressing and decompressing image data through the use of one or more compression code tables selected from a family of predefined tables. *See* Application, p. 1, lines 5-8. Because the image files may be stored in raw and processed formats, many image files are quite large and consume considerable memory space. *See* Application, p. 1, lines 11-30. Accordingly, the present application describes a technique for image data compression that analyzes the image data stream by subregions to identify the

compression code table that provides the optimal compression for each subregion. *See* Application, p. 3, lines 8-17. By utilizing the compression code tables, the image may be later regenerated to the original image data in a lossless fashion. *See* Application, p. 20, line 31 to p. 21, line 3.

**Balkanski et al. Reference**

In contrast to the claimed subject matter, the Balkanski et al. reference is directed to a technique for compressing data to reduce the amount of data through a lossy compression process. *See* Balkanski et al., col. 1, lines 18-21. The Balkanski et al. reference describes lossless image compression as compressing an image with data that may be mathematically restored to the original image, while lossy image compression does not preserve all the information and can not be restored to the original image. *See* Balkanski et al., col. 2, lines 52-58. Accordingly, the Balkanski et al. system describes a data compression process that utilizes a quantizer unit 108 to minimize the bits utilized to display an image. *See* Balkanski et al., Fig. 1; col. 9, lines 4-25. The quantizer unit 108 discards bits, such as the 6 most significant bits and the 15 least significant bits, to provide greater compression of the image, which is a lossy compression process. *See* Balkanski et al., col. 9, lines 25-32. After the image has been quantized, the Balkanski et al. reference describes further compressing the image by applying Huffman code tables 117 that are accessed by a coder unit 111a during compression and by a decoder unit 111b during decompression. *See* Balkanski et al., col. 10, lines 13-18. As a result, the Huffman code tables 117 are utilized to compress data that has been processed (i.e. compressed) by the quantizer unit 108.

**Arguments**

Because the Examiner has rejected the independent claims 1, 12, 18 and 24 based on the same cited reference, Applicants will discuss the recited features missing from the Balkanski et al. reference for each of the independent claims 1, 12, 18 and 24 together. In the rejection of independent claims 1, 12, 18 and 24, the Examiner asserted that the

recited features of the independent claims 1, 12, 18 and 24 are disclosed by the Balkanski et al. reference. However, the Examiner's rejection fails for at least two reasons. First, the Balkanski et al. reference fails to disclose *lossless compression of image data*, which is clearly recited in the independent claims 1, 12, 18 and 24. Secondly, the Balkanski et al. reference fails to disclose *applying the compression code tables to uncompressed image data*. Hence, the Balkanski et al. reference does not anticipate the claimed subject matter, as discussed below.

First, each of the independent claims 1, 12, 18 and 24 includes recitations relating to the *lossless compression of image data*. In the rejection, the Examiner appears to assert that the coder unit 111a of Balkanski et al. utilizes the Huffman code tables 117 to convert the data into lossless compressed data. However, as discussed above, the Balkanski et al. reference describes the use of quantization via the quantizer unit 108 for all of the image data. *See* Balkanski et al., Fig. 1; col. 9, lines 4-25. The quantization clearly compresses the image data by reducing the bits associated with the image through a many-to-one mapping. Once quantized, the remaining bits may not recreate the original image because the quantization discards bits from the original data. *See* Balkanski et al., col. 9, lines 25-32. In fact, based on the definition within the Balkanski et al. reference, the use of quantization is a lossy compression process because all of the image data is not preserved. *See* Balkanski et al., col. 2, lines 52-58. Clearly, the Balkanski et al. reference describes the lossy compression of image data, not lossless compression, as claimed.

Secondly, the independent claims 1 and 12 include recitations relating to *applying the compression code tables to uncompressed image data,* which is not disclosed by the Balkanski et al. reference. In the rejection, the Examiner asserted that the Huffman code tables 117 of the Balkanski et al. reference are used convert uncompressed data into lossless compressed data. However, the quantizer unit 108 of the Balkanski et al. reference selects one of four tables, which relate to different compression ratios, to compress the image data by discarding bits. *See* Balkanski et al., col. 9, lines 25-32; col.

18, lines 1-18. Because the coder unit 111a translates the data after the quantizer unit 108, the image data has already been compressed before the Huffman code tables 117 are applied. As a result, the Huffman code tables 117 are applied by the coder unit 111a after the data has been compressed. Clearly, then, the Huffman code tables 117 are not applied to uncompressed data, much less uncompressed image data representative of individual picture elements. Accordingly, the Balkanski et al. reference fails to disclose *applying the compression code tables to uncompressed image data.*

In view of the argument above, Applicants again respectfully assert that the independent claims 1, 12, 18 and 24 and the respective dependant claims are believed to be patentable over the Balkanski et al. reference. Therefore, Applicants respectfully request the Examiner to withdraw the rejection and allow claims 1-27.

**Conclusion**

In view of the remarks set forth above, Applicants respectfully request allowance of pending claims 1-27. If the Examiner believes that a telephonic interview will help speed this application towards issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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